

First report of *Calma glaucoides* (Alder & Hancock, 1854) (Nudibranchia, Calmidae) from Sweden

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Received: 8 February 2016 / Revised: 26 August 2016 / Accepted: 30 August 2016 / Published online: 12 September 2016
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Abstract In the present contribution, the geographic range of *Calma glaucoides* Alder & Hancock, 1854 is updated, since it was found for the first time in Sweden. This species was previously recorded from different localities in the northeastern Atlantic and western Mediterranean. A molecular approach was used to verify the identity of the specimens.

Keywords Mollusca · Aeolidida · Sweden · Biodiversity · New record

The nudibranch fauna in Sweden appears to be less studied than that in Norway. So far, the only monographic study of the Swedish Nudibranchia is that conducted by Malmberg and Lundin (2015), whereas Evertsen (2001) and Evertsen and Bakken (e.g. 2013) undertook intensive investigations on the nudibranch fauna from Norway. In the present paper, knowledge about the nudibranch fauna in Sweden is updated by reporting *Calma glaucoides* Alder & Hancock, 1854 for the first time. Nine specimens, from 6 to 10 mm in length, were found along the western coast of Sweden (Fig. 1), in water 28 m deep on fine gravel substrate. The identity of the specimens was determined by molecular sequencing of tissue samples from freshly preserved specimens (not shown). *Calma* is a small genus that belongs to the monogeneric family Calmidae Iredale & O'Donoghue, 1923, with only two species: *Calma glaucoides* and *C. gobioophaga* Calado & Urgorri, 2002. The geographical distribution of this

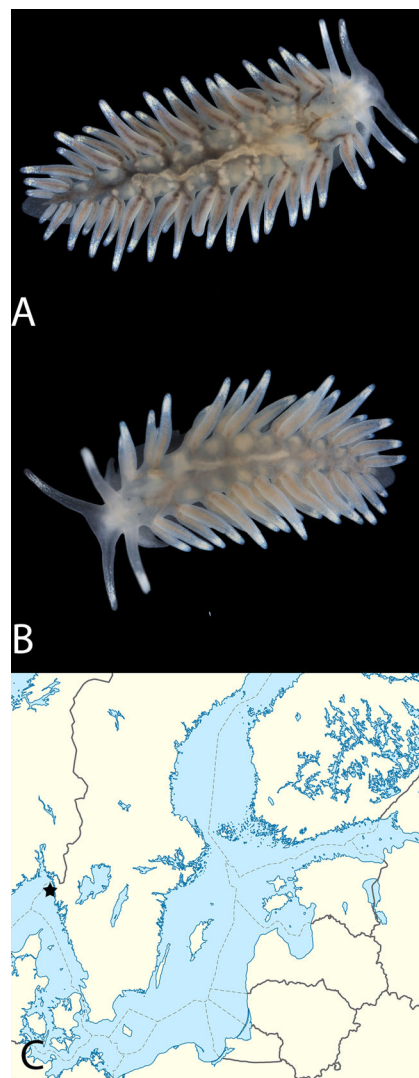


Fig. 1 **a, b** Photographs of the living animals of *Calma glaucoides*. **a** Specimen GNM Gastropoda 9029 and **b** specimen GNM Gastropoda 9030, photos by Fredrik Pleijel. **c** Collecting site of the specimens on the west coast of Sweden

Communicated by V. Urgorri

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genus ranges from the northeastern Atlantic to the western Mediterranean (see Prkic et al. 2014 for a map with all the records of *Calma* spp.). Within Scandinavia, thus far, Calmidae and *C. glaucoides* have been reported only three times, where it is only known from Norwegian waters (Evertsen and Bakken 2013). Evertsen and Bakken (2013) argued that the small number of records of *C. glaucoides* was a result of the difficulties in observing this species in situ. Moreover, during the last century, the Swedish nudibranch fauna has been largely ignored. Nevertheless, the compilation completed by Malmberg and Lundin (2015) updated the nudibranch fauna of Sweden with 89 species, including ten new records. All these new citations, including the one presented here, point out the necessity of a more complete revision of the Scandinavian fauna of Nudibranchia, in particular species from Swedish waters.

Acknowledgments Many thanks go to Mats Larsson and Fredrik Pleijel, who collected and provided specimens and images for this study. This work was supported by the Swedish Taxonomy Initiative (grant dha 2015-7 4.3).

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